

In the Claims

1. (Amended) An axle assembly comprising, in combination:
an axle tube having a first end and a second end;
a mounting module formed as a unitary extension of the axle tube; and
at least one steel insert positioned near the first end of the axle tube,
wherein the at least one steel insert is adapted to be welded with a differential carrier to secure the axle tube to the differential carrier;

wherein the axle tube has an axis between the first end and the second end, and the mounting module comprises at least a yoke having a pair of openings formed generally perpendicular to the axis of the axle tube, and the yoke is a unitary extension of the axle tube near the second end.

2. (Original) The axle assembly of claim 1 wherein the differential carrier comprises one of ductile iron and aluminum.
3. (Original) The axle assembly of claim 1 wherein the mounting module comprises at least one of a yoke, a shock absorber attachment bracket, a stay bar attachment bracket, an upper control arm attachment bracket, a lower control arm attachment bracket, a spring seat, a jounce bumper bracket, a steering damper attachment bracket, and a track bar attachment bracket.

4. (Original) The axle assembly of claim 3 wherein the mounting module is formed unitary with the axle in a lost foam process.

5. (Original) The axle assembly of claim 1 wherein the first end of the axle tube is press fit into an opening in the differential carrier.

6. (Amended) [The axle assembly of claim 1] An axle assembly comprising, in combination:

an axle tube having a first end and a second end;

a mounting module formed as a unitary extension of the axle tube; and

at least one steel insert positioned near the first end of the axle tube,

wherein the at least one steel insert is adapted to be welded with a differential carrier to secure the axle tube to the differential carrier;

wherein the axle tube comprises ductile iron.

7. (Original) The axle assembly of claim 1 further comprising three steel inserts spaced around the first end which can be aligned with corresponding openings in the differential carrier and weld material is positioned in the corresponding openings to secure the axle assembly to the differential carrier.

8. (Amended) An axle assembly comprising, in combination:

an axle tube having an axis between a first end and a second end and adapted to provide structural support to a motor vehicle;

a yoke formed unitary with the axle tube, having a pair of openings formed generally perpendicular to the axis of the axle tube;

and

a differential carrier adapted to provide a structural support for a gear transmission of the motor vehicle and formed as a unitary extension of the axle tube;

wherein the differential carrier is formed as a unitary extension of the axle tube near the first end, and the yoke is formed as a unitary extension of the axle tube near the second end.

9. (Original) The axle assembly of claim 8 further comprising

a second axle tube having a first end and a second end, wherein the first end of the second axle tube is secured to the differential carrier.

10. (Original) The axle assembly of claim 9 wherein each axle tube has a corresponding mounting module formed unitary therewith, each mounting module comprising at least one of a yoke, a shock absorber attachment bracket, a stay bar attachment bracket, an upper control arm attachment bracket, a lower control arm attachment bracket, a spring seat, a jounce bumper bracket, a steering damper attachment bracket, and a track bar attachment bracket.

[12.]11. (Amended) The axle tube assembly of claim 9 wherein the unitary axle tube and differential carrier are formed unitary in a lost foam process.

[13.]12. (Amended) The axle tube assembly of claim 9 wherein the axle tube and unitary differential carrier are formed from ductile iron.